embodiments because they can reduce eddy currents in shield **316** (discussed briefly above and in more detail below with respect to FIGS. **5** and **6**). However, other core configurations may also be used, including PQ cores or other suitable core shapes.

[0031] Winding **440** may be formed from a conductive wire made of copper or other suitable material that is wound about core **420**. Winding **440** may be formed from magnet wire, Litz wire, or any other suitable wire. Winding **440** may be configured such that an alternating current flowing in the wire (generated by the wireless charging circuit inverter described above) induces a magnetic flux that can couple to a receiver to deliver energy wirelessly. In the embodiment of FIG. **4**, winding **440** includes a first portion **442** that is wound clockwise around post **442** and a second portion **444** that is wound counter-clockwise around **424**. Current flow through coil **440** will therefore generate a magnetic flux that leaves core **440** in one direction from one post of the core (e.g., upward out of post **442**) and returns to core **440** in the other direction via the other post of the core (e.g., downward into post **444**). Because the current supplied to coil **440** is an alternating current the flux direction will change repeatedly with current reversals, but the net result is a magnetic flux that extends in an arc between the two posts and can pass through a suitable receiver coil in the accessory to be charged to deliver energy thereto. As noted above, winding **440** may additionally or alternatively be wound around other portions of the core, such as central portion **450**. The particulars of a given embodiment, including ferrite dimensions, number of winding turns, wire size, etc. may vary and will, in many cases, be interrelated. The particular dimensions and similar characteristics may be calculated and optimized for a given application using known principles and are thus omitted here.

[0032] In wireless charging applications it may be desirable to contain and steer the aforementioned magnetic flux so that as much energy is possible is delivered to the receiver. This has the beneficial effects of delivering more energy to the receiver more quickly. Additional advantages of preventing magnetic flux from affecting objects other than the receiver can include preventing undesired heating of surrounding metallic objects and preventing electromagnetic interference with adjacent circuitry. As described above, personal electronic device **300** may be constructed with certain portions (e.g., frame **304** and back **307**) made of a metallic/conductive material (aluminum, stainless steel, etc.) or a non-metallic/non-conductive material (glass, plastic, etc.) Depending on the particular construction, there may be different interactions between the flux generated by coil assembly **410** and the surrounding components.

[0033] Additionally, in at least some embodiments, personal electronic device **300** may include a display and/or touch sensing circuitry that may be susceptible to electromagnetic interference from the wireless accessory charging system. Thus, it may be desirable to provide shielding around the accessory wireless charging coil assembly to minimize such interactions and their deleterious effects. Moreover, providing such shielding can, in at least some embodiments, provide sufficient electromagnetic isolation between the coil assembly and adjacent components so that a single shielded coil assembly design may be incorporated into different devices that materials with different electromagnetic properties adjacent the coil. Without the shield, some amount of redesign of the coil assembly might be necessary to accommodate such electromagnetic differences in various applications.

[0034] FIGS. **5** and **6** schematically depict two exemplary configurations of shielding that may be employed to that end. FIG. **5** illustrates a cross-section/end view of an accessory wireless charging coil assembly like that depicted in FIG. **4**. This end view can correspond to the views depicted in FIGS. **2** and **3** discussed above. The wireless charging coil assembly includes a core/ferrite **520**, including a post **520***a*, having a winding **540** wound thereabout. The coil assembly may further include a shield **560** disposed around the coil assembly to prevent flux escaping along paths including the shield and coupling into other objects. Shield **560** may be made of any suitable conductive material. In some embodiments, the shield may be copper. Not shown in FIG. **5**, which is a cross-section/end view are the two ends of the coil assembly, which may also be shielded by shield **560**. In such case shield **560** may be a five-sided rectangular prism that is open on the top to allow wireless charging of the accessory. In other embodiments, shield **560** may be open on one or both ends, if appropriate for a given application. Although shield **560** is depicted as rectangular, it may be of any other shape suitable for blocking undesired flux paths, conforming to the coil assembly and other components of personal electronic device **300**, and fitting in the allotted space. Shield **560** may correspond to shield **316** depicted in FIG. **3**, discussed above, which is substantially rectangular in section but includes rounded corners.

[0035] FIG. **6** illustrates an alternative cross-section/end view that differs slightly from FIG. **5**. In this embodiment, the wireless charging coil assembly includes a core/ferrite **620**, including a post **620***a*, having a winding **640** wound thereabout. The coil assembly may further include a shield **660** disposed about the sides of the coil assembly to prevent flux escaping along paths including the shield and coupling into other objects. In a departure from the embodiment of FIG. **5**, shield **660** does not extend below core/ferrite **620**. Rather the magnetic properties of the core/ferrite **620** itself serve to contain the flux and prevent it from escaping through the bottom of the assembly. As in the embodiment of FIG. **5**, shield **660** may be made of any suitable conductive material, such as copper. Not shown in FIG. **6**, which is a cross-section/end view are the two ends of the coil assembly, which may also be shielded by shield **660**. In such case shield **560** may be a four-sided rectangular prism that is open on the top to allow wireless charging of the accessory and also on the bottom. In other embodiments, shield **660** may be open on one or both ends, if appropriate for a given application. Although shield **660** is depicted as rectangular, it may be of any other shape suitable for blocking undesired flux paths, conforming to the coil assembly and other components of personal electronic device **300**, and fitting in the allotted space.

[0036] Turning now to FIG. **7**, an optional additional spacer component **751** will be described. Some ferrite formulations or other materials used to construct a wireless accessory charging coil assembly as described herein may be somewhat brittle. This may render the core susceptible to damage, such as crack damage at location **702**. Susceptibility to this type of damage may be increased by the shape or dimensions of a particular core design embodiment, including some configurations of a pot core/modified pot core. This type of damage may be more likely during fabrication